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WHAT IS CLAIMED IS:

1. A sterilization container system comprising: an enclosure defining an interior volume; an upwardly facing surface in the interior volume; a flexible elastomeric mat having a downwardly facing surface resting upon the upwardly facing surface; and

wherein the downwardly facing surface is provided with a pattern of ridges and wherein the pattern is such that no fold line can traverse the mat from one side to the other without intersecting at least one ridge.

- 2. A sterilization container system according to claim 1 wherein the pattern is such that no fold line can traverse the mat from one side to the other without intersecting a plurality of the ridges.
- 3. A sterilization container system wherein the ridges have a height of 0.5 mm to 10.0 mm.
 - 4. A sterilization container system according to claim 3 wherein the ridges have a height of 0.75 mm to 5.0 mm.

5. A sterilization container system according to claim 4 wherein the ridges have a height of 1.0 mm to

4.0 mm.

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- 6. A sterilization container according to claim 1 wherein the flexible elastomeric mat is formed of silicone.
- 7. A sterilization container according to claim 6 wherein the silicone has a hardness of less than 90A on the Shore A Scale.
 - 8. A sterilization container according to claim 6 wherein the pattern extends substantially across a dimension of the lower surface.
 - 9. A sterilization container according to claim 1 wherein the mat further comprises a plurality of upwardly projecting members.
 - 10. A sterilization container according to claim 1 wherein the mat further comprises a plurality of apertures therethrough.
 - 11. A sterilization container according to claim 1 wherein the pattern is continuous.
 - 12. A sterilization container according to claim 1 wherein the pattern is discontinuous.
 - 13. A sterilization container according to claim 1 wherein the pattern comprises concentric shapes.

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14. A method of sterilizing an item comprises the steps of:

placing a flexible, elastomeric mat into an
enclosure having an interior volume;

placing the item onto the mat; and

levitating the mat above a bottom surface of the enclosure via a pattern of ridges on a lower surface of the mat, the pattern being such that no fold line can traverse the mat from one side to the other without intersecting at least one ridge.

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